

VPI/96-08 DIV 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner

Not yet available

Group Art Unit :

2764

Applicants

Keith P. Wilson et al.

Serial No.

09/678,016

Filed

October 2, 2000

For

MOLECULES COMPRISING AN IMPDH-LIKE

BINDING POCKET AND ENCODED DATA

STORAGE MEDIUM CAPABLE OF GRAPHICALLY DISPLAYING THEM

New York, New York January 2, 2000

Hon. Commissioner for Patents Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §§ 1.56 AND 1.97

Sir:

Pursuant to 37 C.F.R. §§ 1.56 and 1.97, applicants, through their attorney, make of record the documents listed below (copies enclosed herewith). A completed Form PTO-1449 listing all of the documents in alphabetical order is enclosed herewith.

1

United States Patents

<u>Inventor</u>	Serial No. ·	<u>Issue Date</u>
Carter	4,833,233	May 23, 1989
Subbiah	5,353,236	October 4, 1994
Sjogren	5,380,879	January 10, 1995
Patterson et al.	5,444,072	August 22, 1995

Foreign Patent Applications

Country	Publication No.	Publication Date
PCT	WO 90/01545	February 22, 1990
PCT	WO 94/01105	January 20, 1994
PCT	WO 94/12184	June 9, 1994
PCT	WO 94/17185	August 4, 1994
PCT	WO 94/25860	November 10, 1994

<u>Articles</u>

- H.J. Bohm, "The Computer Program LUDI: A New Method For The De Novo Design of Enzyme Inhibitors", <u>Journal of Computer-Aided Molecular Design</u>, 6, pp. 61-78 (1992).
- P.N. Bryan, "Protein Engineering", <u>Biotech Adv.</u>, 5, pp. 221-234 (1987).
- I.D. Campbell et al., "Diffraction, in Biological Spectroscopy", <u>The Benjamin/Cummings Publishing Company</u>, <u>Inc.</u>, Menlo Park, CA, pp. 299-326 (1984).
- N. Claude Cohen et al., Molecular Modeling Software and Methods for Medicinal Chemistry", <u>Journal of Medicinal Chemistry</u>, 33(3), pp. 883-894 (1990).
- C.R. Gregory et al., "Treatment With Rapamycin and Mycophenolic Acid Reduces Arterial Intimal Thickening Produced by Mechanical Injury and Allows Endothelial Replacement", <u>Transplantation</u>, 59(5), pp. 655-661 (March, 1995).
- C. Hansch et al., "Comparison of the Inhibition of Escherichia coli and Lactobacillus Casei Dihydrofolate Reductase by 2,4-diamino-5-(substituted-benzyl) pyrimidines;

quantitative Structure-Activity Relationships, X-Ray Crystallography and Computer Graphics in Structure-Activity Analysis", Chemical Abstracts, 97:298f, p. 29 (1982); Journal of Medicinal Chemistry, 25, pp. 777-84 (1982).

- J.A. Huete-Pérez et al., "Identification of the IMP Binding Site in the IMP Dehydrogenase From *Tritrichomonas Foetus*", Biochemistry, 34(42), pp. 13889-13894 (1995).
- J. Jancarik et al., "Sparse Matrix Sampling: A Screening Method for Crystallization of Proteins", <u>J. Appl. Cryst.</u>, 24, pp. 409-411 (1991).
- A. Kajihara et al., "Protein Modelling Using a Chimera Reference Protein Derived From Exons", <u>Protein Eng'g</u>, 6, pp. 615-620 (1993).
- R. Li, et al., "A comparison by QSAR, Crystallography, and Computer Graphics of the Inhibition of Various Dihydrofolate Reductases by 5-(x-benzyl)-2,4-diaminopyrimidines", Chemical Abstracts, 98:172570a, p. 28 (1983); Quantitative Structure Activity Relationships Pharmacol. Chem. Biol., 1, pp. 1-7 (1982).
- G.M. Makara et al., "Nuclear Magnetic Resonance and Molecular Modeling Study on Mycophenolic Acid: Implications for Binding to Inosine Monophosphate Dehydrogenase", <u>J. Med. Chem.</u>, 39(6), pp. 1236-1242 (1996).
- Y.C. Martin, "3D Database Searching In Drug Design", <u>Journal</u> of <u>Medicinal Chemistry</u>, 35 (12), pp. 2145-54 (June 12, 1992).
- C. Montero et al., "Demonstration of Induction of Erythrocyte Inosine Monophospate Dehydrogenase Activity in Ribavirin-Treated Patients Using a High Performance Liquid Chromatography Linked Method", Clinica Chimica Acta, 238, pp. 169-178 (1995).
- J.B. Moon et al., "Computer Design of Bioactive Molecules: A Method for Receptor-Based De Novo Ligand Design", <u>Proteins:</u> <u>Structure</u>, <u>Function</u>, and <u>Genetics</u>, 11, pp. 314-328 (1991).
- R.E. Morris, "New Small Molecule Immunosuppressants for Transplantation: Review of Essential Concepts", <u>The Journal of Heart and Lung Transplantation</u>", November/December, pp. S275-S286 (1993).

- D. Musil et al., "The refined 2.15 Å X-ray crystal structure of human liver cathepsin B: the structural basis for its specificity", $EMBO\ J.$, 10(9), pp. 2321-2330 (1991).
- A.J. Russell et al., "Rational Modification of Enzyme Catalysis by Engineering Surface Charge", <u>Nature</u>, 328, pp. 496-500 (August 6, 1987).

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- A.R. Sielecki et al., "Structure of Recombinant Human Renin, a Target for Cardiovascular-Active Drugs, at 2.5 Å Resolution", Science, 243, pp. 1346-1351 (March, 1989).
- M.D. Sintchak et al., "Structure and Mechanism of Inosine Monophosphate Dehydrogenase in Complex with the Immunosuppressant Mycophenolic Acid", <u>Cell</u>, 85, pp. 921-930 (June 14, 1996).
- U. Uhlin et al., "Crystallization and Crystallographic Investigations of Ribonucleotide Reductase Protein R1 From *Escherichia Coli*", Federation of European Biochemical Societies, 336(1), pp. 148-152 (1993).
- F.G. Whitby et al., "Preliminary X-Ray Crystallographic Analysis of *Tritrichomonas foetus* Inosine-5'-Monophosphate Dehydrogenase", <u>Proteins: Structure, Function, and Genetics</u>, 23, pp. 598-603 (1995).
- C.S. Wright et al., "Structure of Subtilisin BPN'at 2.5 Å Resolution", Nature, 221, pp. 235-242 (January 18, 1969).

Applicants respectfully request that the above-cited documents be (1) fully considered by the Examiner during the course of the examination of this application and (2) printed on any patent issuing from this application.

Applicants also request that a copy of the enclosed Form PTO-1449 duly initialed by the Examiner be forwarded to the undersigned with the next communication.

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This Statement is submitted within three months of the application filing date. In accordance with

37 C.F.R. § 1.97, submission of this Statement requires no fee.

The Commissioner is hereby authorized to charge payment of any additional fees required in connection with this Supplemental Information Disclosure Statement to Deposit Account No. 06-1075. A duplicate copy of this letter is transmitted herewith.

Respectfully submitted,

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Signature of Person Signing